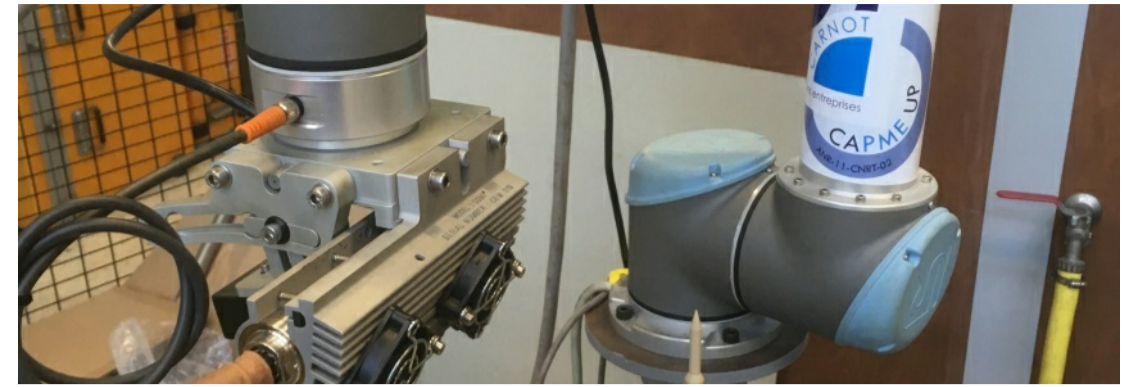


# RESIDUAL STRESS DETERMINATION

From X-ray diffraction to incremental hole drilling



## Your expectations

You want to determine residual stresses in order to:

Develop or test a manufacturing process:

- Raw part
  - Heat or thermo-chemical treatment (tempering, case hardening, etc.)
  - Machining (grinding, milling, turning, etc.)
  - Work treatment (shot peening, roller-burnishing, etc.)
- Compare several processes concerning fatigue strength or stress corrosion.

## Our solutions

Definition and implementation of suitable protocols:

Advice and support for developing an experimental design  
Assistance in drafting specifications

Surface or in depth analysis:

X-ray diffraction method (non-destructive)  
Incremental hole drilling method (destructive)

Working with large instruments:

Neutron radiation method (non-destructive)  
Synchrotron radiation method (non-destructive)

Assistance in exploiting and capitalising on the results.

## Your benefits

Comprehensive management of your experiment requirements  
Project monitoring adapted to your demands  
Standardised tests (EN15305-2009 and ASTM E837-2008)

Services of a provider with proven skills (35 years of capitalising on experience) that is certified both by approved organisations (ISO 9001) and its customers (Safran, Airbus, Renault, PSA, etc.)  
Access to Cetim's manifold skills to help you optimise your products and processes.



**Question and Answer Service**  
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